

FIG. 1A

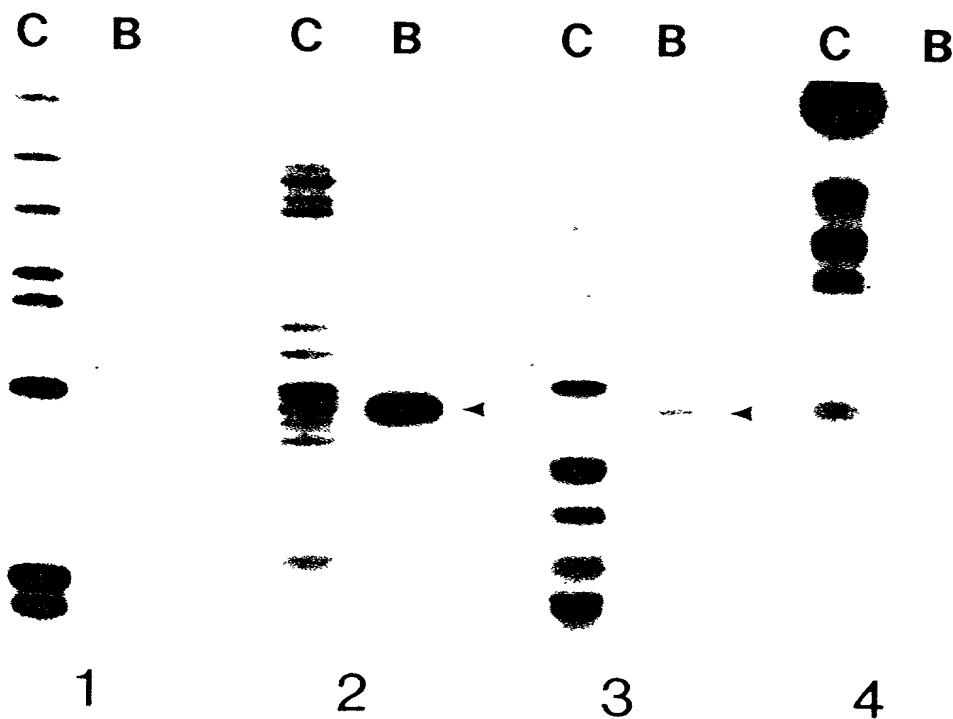


FIG. 1B

| | | | | | | |
|------------|------|---|---|-------|---|---|
| Host cell: | HeLa | | | BSC40 | | |
| p53: | - | + | + | - | + | + |
| p53 Ab: | + | + | - | + | + | - |



FIG. 2A

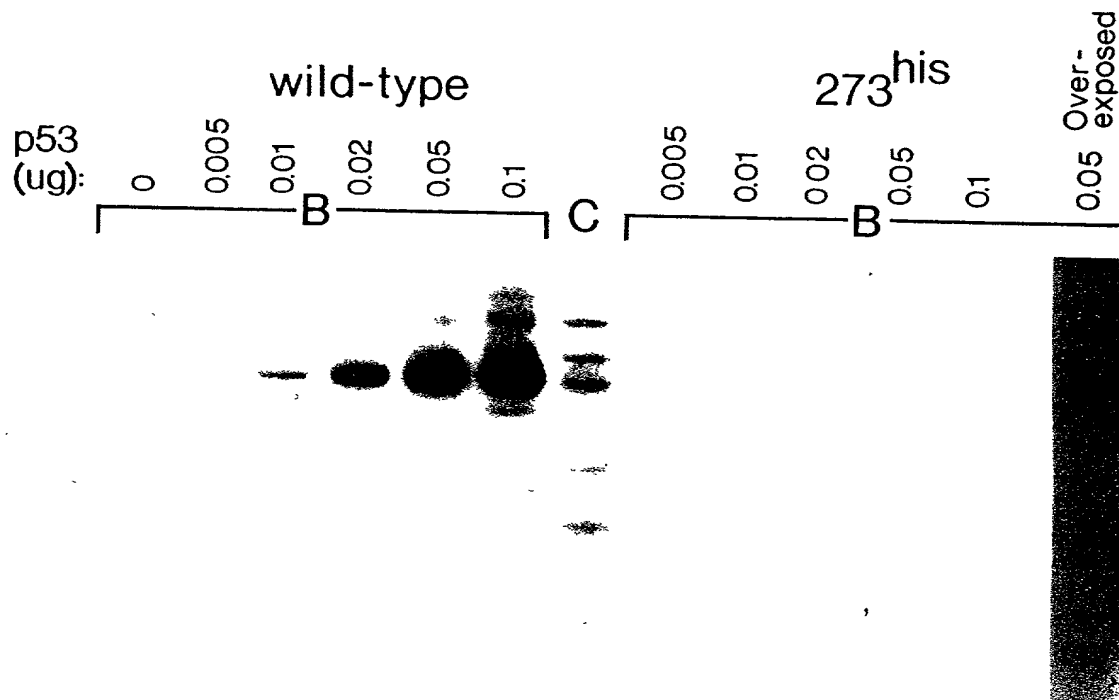


FIG. 2B

Protein source: Vac Vac Vac Bac
p53: - wt 175^{his} wt
B B C B B



FIG. 3A

```

1      10      20      30      40      50      60      70      80      90
AATACGACTCACTATAGGGCGAAATTGGGTACCGGGCCCCCTCGAGGTCGACGGTATCGATAAGCTTGATATTCTCCCCAGATGTAGTG
TTATGCTGAGTGATATCCCGCTTAACCCATGGCCCGGGGAGCTCCAGCTGCCATAGCTATTCGAACTATAAGAGGGGCTCTACATCAC

100     110     120     130     140     150     160     170     180
AAAGCAGGTAGATTGCCCTTGCCCTGGACTTGCCCTTGCCCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCT
TTTCGTCCTCTAACGGAAACGGACCTGAACGGACCGGAACGGAAGAAAGAAAGAAAGAAATATGAAGAGAAAGAAAGAAAGAAAGAAAGAA

190     200     210     220     230     240     250     260     270
TCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCT
AGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGA

280     290     300     310     320     330     340     350     360
TAGAGGGCAATGGCGCGATCTCGGCTCACCGCACCCCTCCGCTCCAGGTTCAAGCGATTGGGGGATCCACTAGTTCTAGAGCGGCCGCC
ATCTCCCGTTACCGGCTAGAGCGGAGTGGCGTGGAGGCGGAGGTTCCAAAGTTCGCTAACCCCTAGGTGATCAAGATCTCGCCGCGCGG

370     380     390     400     410     420
ACCGCGGTGGAGCTCCAGCTTTTGTCCCTTTAGTGAGGGTTAAT
TGGCGCCACCTCGAGGTCGAAACAAGGGAATCACTCCCAATTA

```

← VECTOR

← VECTOR

FIG. 3B

← VECTOR
1 10 20 30 40 50 60 70 80 90
AAGCTTGATAATCATGGAGGTGAGTTTTCCAGTGCTGTTCTCATGATAGTGACTAAGTCTCCCATGATCTGATGGTTTTTATAAAGGGCA
TTCGAACTATTAGTACCTCCACTCAAAAGGTCAAGAGTACTAGCACTGATTCAGAGGGTACTAGACTACCAAAATATTTCCCGT
100 110 120 130 140 150 160 170 180
GTCCCTTACACATGCTCTCTTGCTTGCTACCATGTAAAGACATGCCCTGTGCTCCTCTTTTGGCCTTCTGCCATGATTGTGAGACCTCCCCA
CAGGAAGATGTGTACGAGAGAACGAACGATGGTACATTCTGTACGGACACGAGGAGAAACGGAGACGGTACTAACACTCTGGAGGGGT
190 200 210 220 230
GCCATGTGGAACCTGTGAGTATCGAATTCCTGCAGCCCGGGGGATCCACTAGTTCTAGA
CGGTACACCTTGACACTCATAGCTTAAGGACGTCGGGGCCCCCTAGGTGATCAAGATCT

FIG. 4B

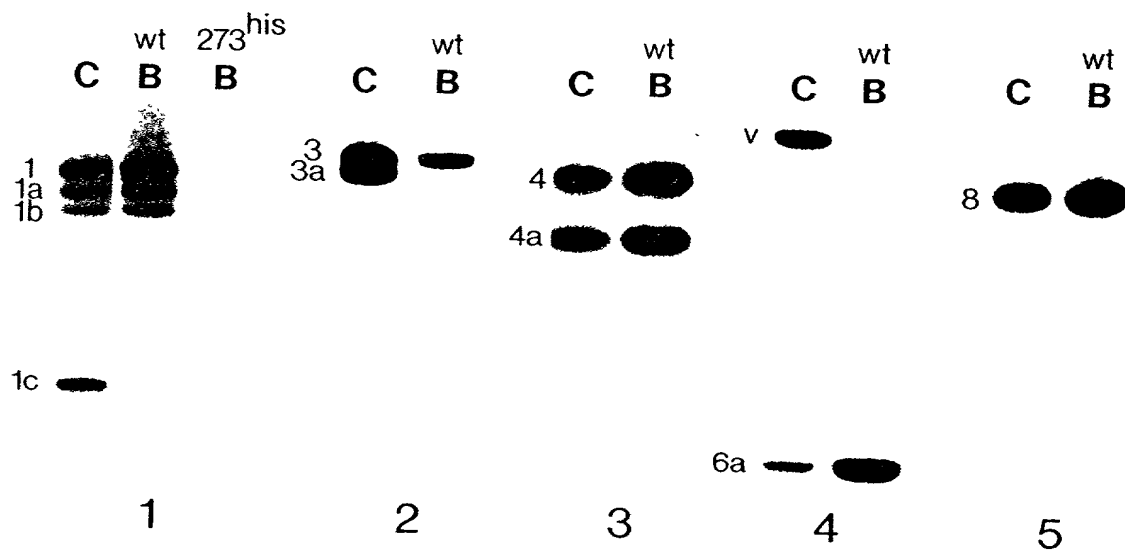


FIG. 5A

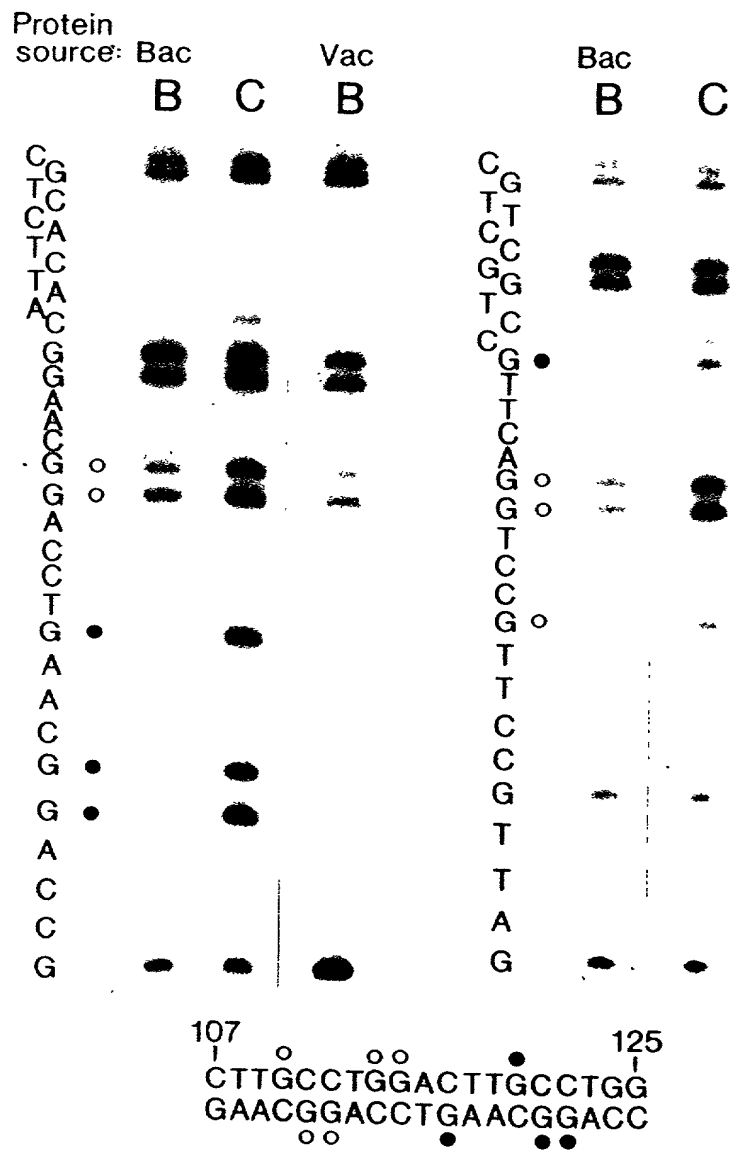


FIG. 5B

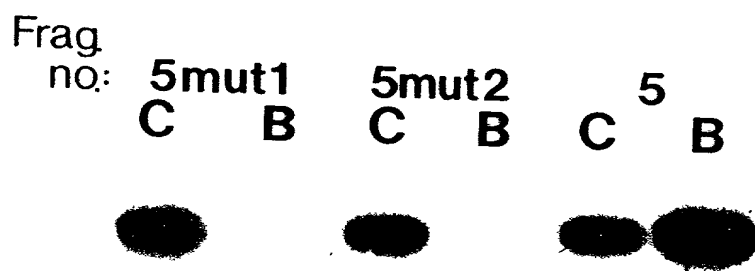


FIG. 6

FIG. 6

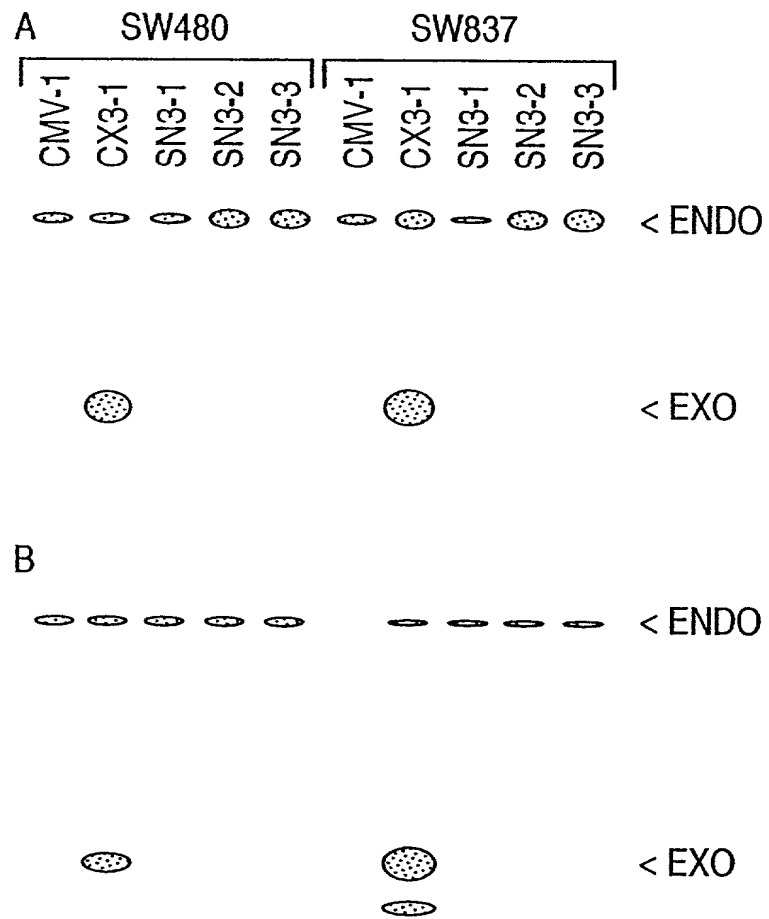


FIG. 7A

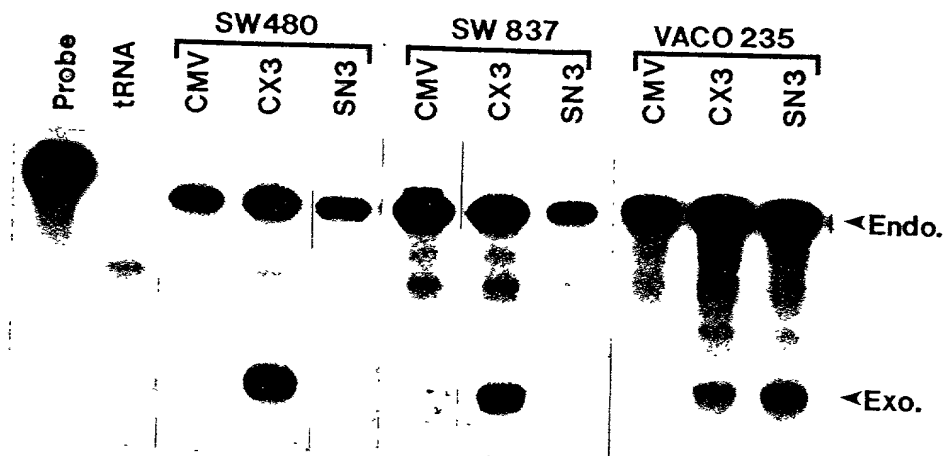


FIG. 7B

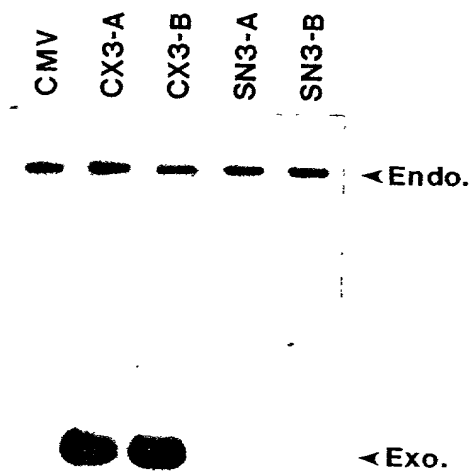


FIG. 8A

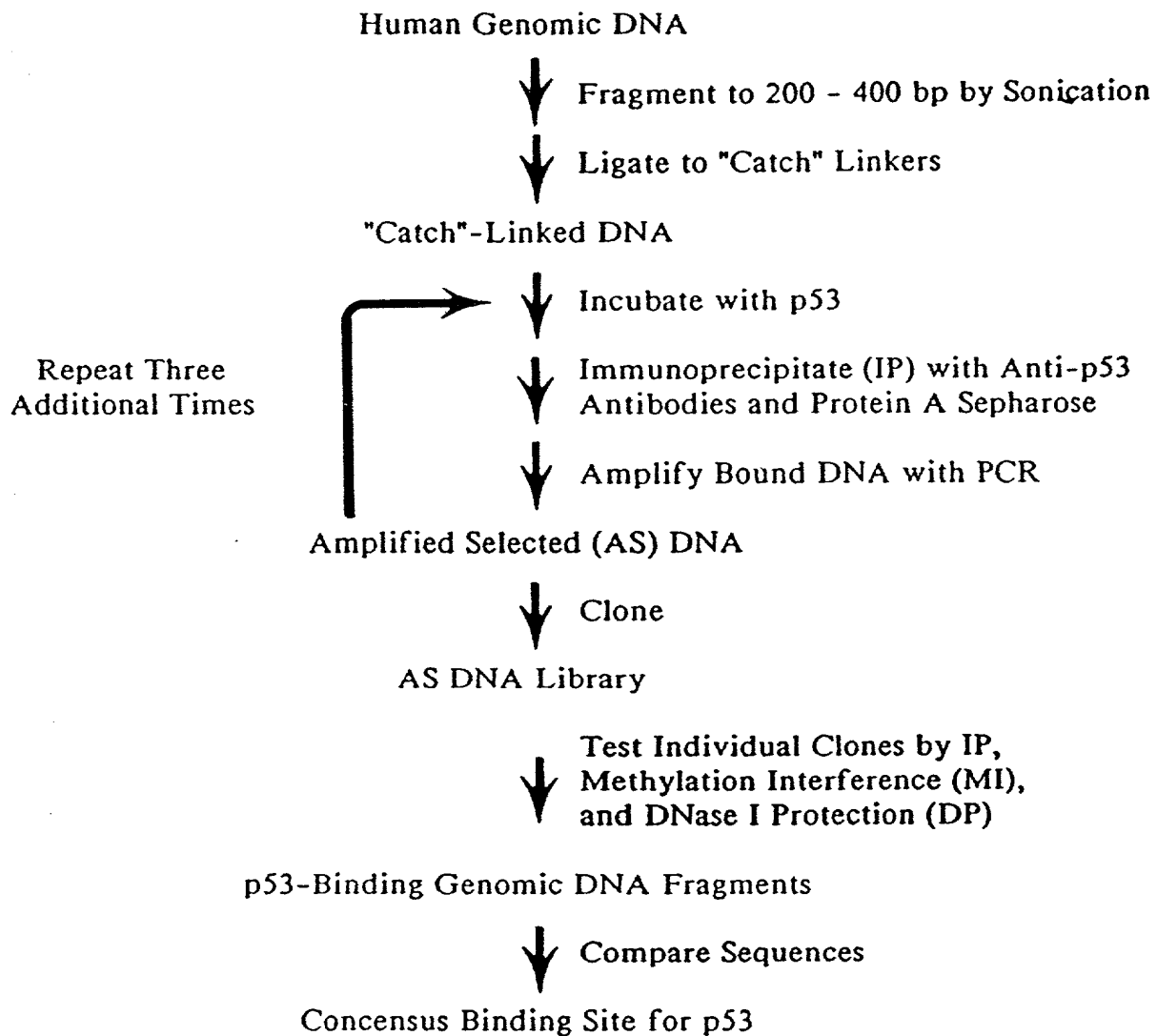
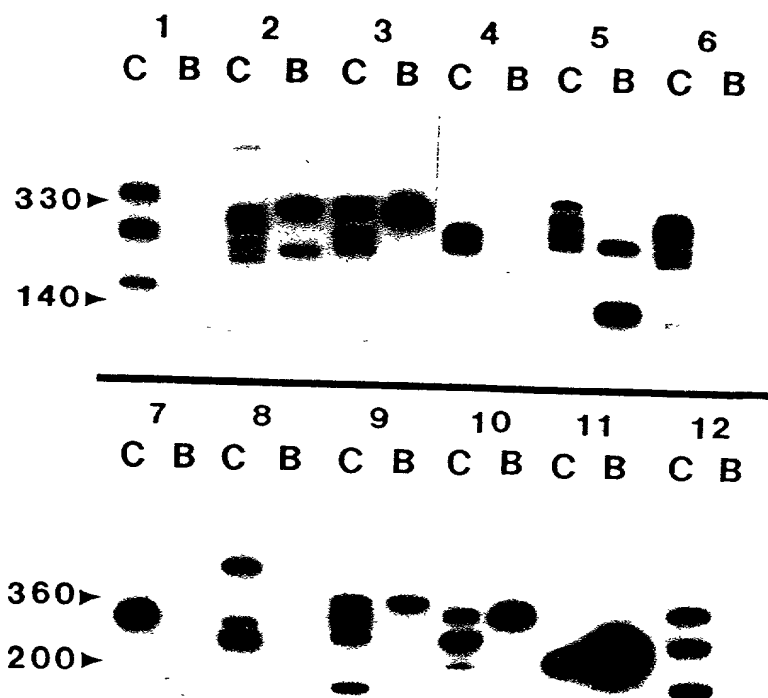


FIG. 8B



B B B and and and B B B
 B B B and and and B B B
 B B B and and and B B B

FIG. 9

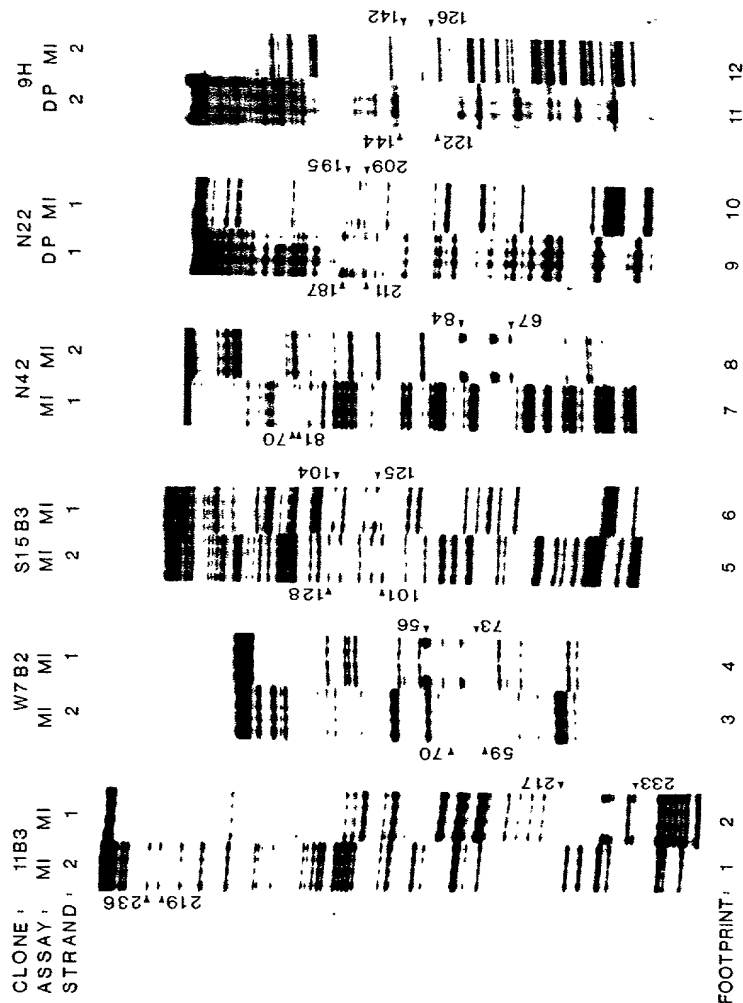


FIG. 10A

| | Clone | Size (bp) | 5'-bp | nnnnnnnnnnnnnnnn | R | R | R | C | W | G | Y | Y | nnnnnnnnnnnnnnnn |
|-----|--------|-----------|-------|------------------|---|---|---|---|-----|---|-----|---|------------------|
| 1. | S57 | 295 | 144 | cgacctgtcacaccg | G | G | G | C | C | T | G | T | C |
| 2. | N22 | 357 | 178 | attttcaccatgctt | c | t | G | C | A | T | G | T | C |
| 3. | 11A2 | 387 | 317 | ccccatcctccactg | A | A | A | C | AaT | G | C | C | C |
| 4. | W211 | 249 | 119 | tttgctctaccatcc | A | G | G | C | A | T | G | C | C |
| 5. | W7B2 | 139 | 41 | tatctgtgcagctgt | G | G | G | C | A | T | G | T | T |
| 6. | 3H | 126 | 50 | aactagatccttttc | A | G | A | C | A | T | G | T | T |
| 7. | 8A | 483 | 445 | gctgggtgcacaagag | t | G | A | C | A | T | G | T | C |
| 8. | 532 | 335 | 229 | catcatgccacctgc | A | G | G | C | A | T | G | T | C |
| 9. | 64A2 | 349 | 120 | caaaccagggtgtct | t | G | A | C | T | T | G | C | C |
| 10. | W7A1 | 264 | 124 | gccaaaacataaacac | c | A | G | C | | T | G | C | C |
| 11. | S61 | 202 | 1 | | c | A | A | C | T | T | G | T | C |
| 12. | 11B3 | 248 | 201 | actgtttgatgatgaa | A | G | A | C | A | A | G | C | C |
| 13. | N42 | 248 | 49 | gcagtgtggtggagg | A | A | A | C | A | A | G | C | C |
| 14. | S201 | 326 | 164 | tgttcataacctgtcc | A | C | A | C | T | T | G | T | C |
| 15. | S15B3 | 248 | 83 | ctttaattcagtttgt | A | A | A | C | A | T | GaC | T | T |
| 16. | S592I | 254 | 39 | ctcagttctcagctg | G | G | A | C | T | T | G | C | C |
| 17. | S592II | 254 | 130 | tgcctcagcaccttc | A | G | G | t | TcT | G | C | C | C |
| 18. | 2Nb | 470 | 42 | gcctttgttgtgccc | t | G | A | C | T | T | G | C | C |
| 19. | 9H | 467 | 108 | gtattctcttttccct | A | A | G | C | A | T | G | C | C |
| 20. | CBE10d | 425 | 89 | tgaagcagggtagat | t | G | C | C | T | T | G | C | C |

Combined Nucleotide Usage (%) within the Two Monomers of the Consensus Binding Site:

| 3'-bp | nnnnnnnnnnnnnnnn | Y | Y | Y | G | W | C | R | R | R | C | W | G | Y | Y | Y |
|-------|------------------|---|---|---|-----|---|---|-----|---|---|---|---|---|---|---|---|
| 194 | acctgtcacacacggg | C | T | | GaC | A | T | GaC | C | T | | | | | | |
| 227 | ccttctccactggcc | A | G | C | A | A | G | T | C | A | | | | | | |
| 367 | ctccggcctgaatga | A | G | A | C | T | T | G | T | C | T | | | | | |
| 164 | cactcgttatttcct | | | | | T | T | G | C | C | T | | | | | |
| 91 | cctgtgctagttccc | A | G | G | C | A | A | G | C | T | T | | | | | |
| 99 | gtacaagtttatttt | t | A | A | C | A | A | G | T | C | A | | | | | |
| 483 | tgtc | C | G | A | C | G | T | G | T | T | T | | | | | |
| 282 | tgtgctttgttgttt | G | G | G | C | | T | G | T | C | T | | | | | |
| 181 | ctcccccttccccctc | t | G | A | C | A | T | G | T | T | C | | | | | |
| 173 | taccacgctcagccc | A | G | G | C | A | T | G | C | A | G | | | | | |
| 49 | cggtttttggtatt | G | G | A | C | A | T | G | T | T | C | | | | | |
| 248 | tgggggggtgggg | G | G | G | C | A | G | G | T | C | C | | | | | |
| 99 | agggcaggctgggac | G | G | A | t | g | T | G | C | C | C | | | | | |
| 214 | acacctgtcttgttt | A | t | A | C | C | T | G | C | C | T | | | | | |
| 143 | aattacaattcgatt | t | G | A | C | A | T | G | T | T | C | | | | | |
| 88 | tggggcactgctgc | t | G | G | C | C | A | G | C | C | C | | | | | |
| 179 | ctttccctttcagcat | G | G | G | C | T | T | G | T | T | C | | | | | |
| 91 | gggaatgtcttgctgc | A | G | A | C | A | T | G | T | T | T | | | | | |
| 157 | tttcatctcctctga | t | G | A | C | T | T | G | T | T | C | | | | | |
| 138 | ggccttgccctttct | G | G | A | C | T | T | G | C | C | T | | | | | |

FIG. 12A

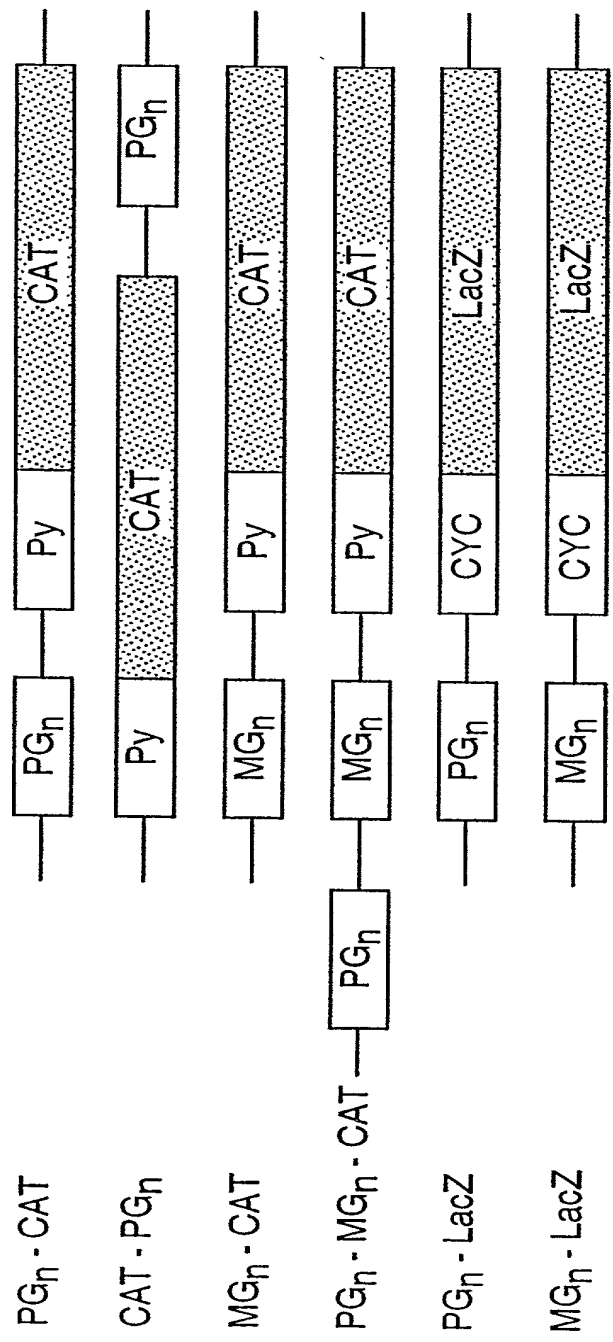
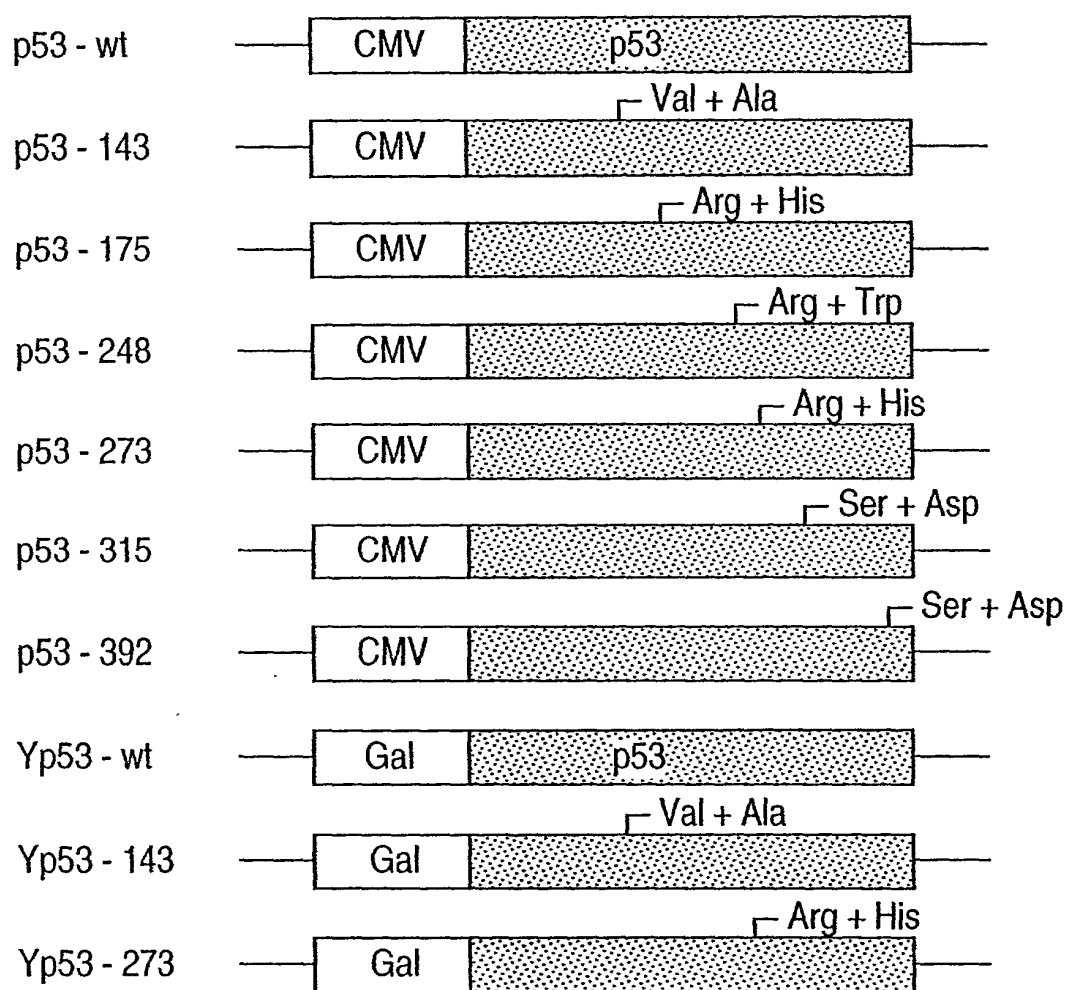
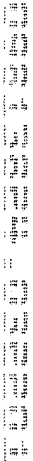


FIG. 12B



| Author | Year | Country | Sample Size | Study Design | Outcome Measure | Findings |
|------------------|------|-------------|-------------|-----------------|-----------------|---|
| Smith et al. | 2015 | USA | 1,200 | Longitudinal | Depression | Increased risk of depression in children of parents with mental illness. |
| Johnson et al. | 2016 | UK | 800 | Cross-sectional | Anxiety | Higher levels of anxiety in children of parents with mental illness. |
| Williams et al. | 2017 | Canada | 1,500 | Longitudinal | Substance Use | Increased risk of substance use in children of parents with mental illness. |
| Miller et al. | 2018 | Australia | 900 | Cross-sectional | Self-harm | Higher rates of self-harm in children of parents with mental illness. |
| Chen et al. | 2019 | China | 2,000 | Longitudinal | Depression | Increased risk of depression in children of parents with mental illness. |
| Lee et al. | 2020 | South Korea | 1,100 | Cross-sectional | Anxiety | Higher levels of anxiety in children of parents with mental illness. |
| Wong et al. | 2021 | Malaysia | 1,300 | Longitudinal | Substance Use | Increased risk of substance use in children of parents with mental illness. |
| Ng et al. | 2022 | Singapore | 1,400 | Cross-sectional | Self-harm | Higher rates of self-harm in children of parents with mental illness. |
| Patel et al. | 2023 | India | 1,600 | Longitudinal | Depression | Increased risk of depression in children of parents with mental illness. |
| Sharma et al. | 2024 | India | 1,700 | Cross-sectional | Anxiety | Higher levels of anxiety in children of parents with mental illness. |
| Reddy et al. | 2025 | India | 1,800 | Longitudinal | Substance Use | Increased risk of substance use in children of parents with mental illness. |
| Verma et al. | 2026 | India | 1,900 | Cross-sectional | Self-harm | Higher rates of self-harm in children of parents with mental illness. |
| Choudhary et al. | 2027 | India | 2,100 | Longitudinal | Depression | Increased risk of depression in children of parents with mental illness. |
| Sharma et al. | 2028 | India | 2,200 | Cross-sectional | Anxiety | Higher levels of anxiety in children of parents with mental illness. |
| Verma et al. | 2029 | India | 2,300 | Longitudinal | Substance Use | Increased risk of substance use in children of parents with mental illness. |
| Choudhary et al. | 2030 | India | 2,400 | Cross-sectional | Self-harm | Higher rates of self-harm in children of parents with mental illness. |



| Author | Year | Country | Sample Size | Study Design | Outcome Measure | Findings |
|------------------|------|-------------|-------------|-----------------|-----------------|---|
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| Johnson et al. | 2016 | UK | 800 | Cross-sectional | Anxiety | Higher levels of anxiety in children of parents with mental illness. |
| Williams et al. | 2017 | Canada | 1,500 | Longitudinal | Substance Use | Increased risk of substance use in children of parents with mental illness. |
| Miller et al. | 2018 | Australia | 900 | Cross-sectional | Self-harm | Higher rates of self-harm in children of parents with mental illness. |
| Chen et al. | 2019 | China | 2,000 | Longitudinal | Depression | Increased risk of depression in children of parents with mental illness. |
| Lee et al. | 2020 | South Korea | 1,100 | Cross-sectional | Anxiety | Higher levels of anxiety in children of parents with mental illness. |
| Wong et al. | 2021 | Malaysia | 1,300 | Longitudinal | Substance Use | Increased risk of substance use in children of parents with mental illness. |
| Ng et al. | 2022 | Singapore | 1,400 | Cross-sectional | Self-harm | Higher rates of self-harm in children of parents with mental illness. |
| Patel et al. | 2023 | India | 1,600 | Longitudinal | Depression | Increased risk of depression in children of parents with mental illness. |
| Sharma et al. | 2024 | India | 1,700 | Cross-sectional | Anxiety | Higher levels of anxiety in children of parents with mental illness. |
| Reddy et al. | 2025 | India | 1,800 | Longitudinal | Substance Use | Increased risk of substance use in children of parents with mental illness. |
| Verma et al. | 2026 | India | 1,900 | Cross-sectional | Self-harm | Higher rates of self-harm in children of parents with mental illness. |
| Choudhary et al. | 2027 | India | 2,100 | Longitudinal | Depression | Increased risk of depression in children of parents with mental illness. |
| Sharma et al. | 2028 | India | 2,200 | Cross-sectional | Anxiety | Higher levels of anxiety in children of parents with mental illness. |
| Verma et al. | 2029 | India | 2,300 | Longitudinal | Substance Use | Increased risk of substance use in children of parents with mental illness. |
| Choudhary et al. | 2030 | India | 2,400 | Cross-sectional | Self-harm | Higher rates of self-harm in children of parents with mental illness. |

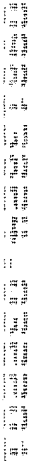


FIG. 14

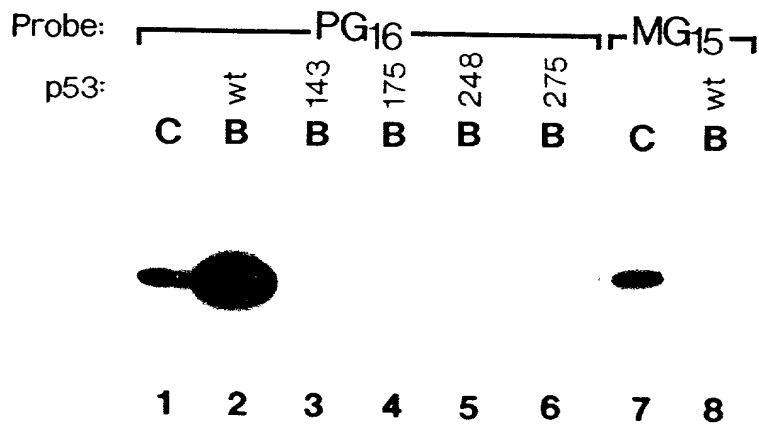


FIG. 15A

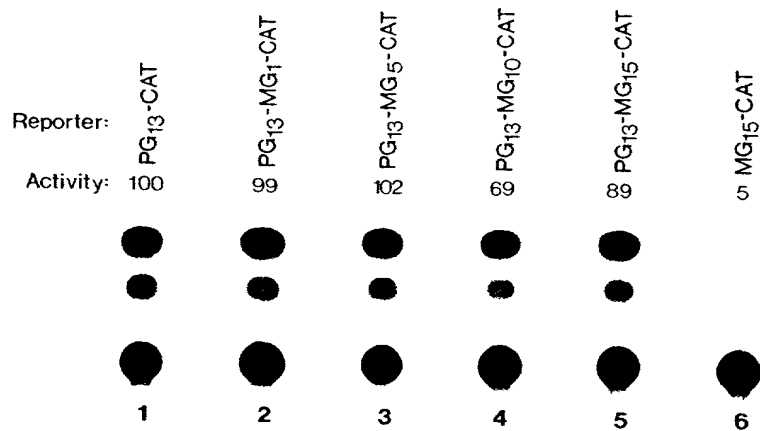


FIG. 15B

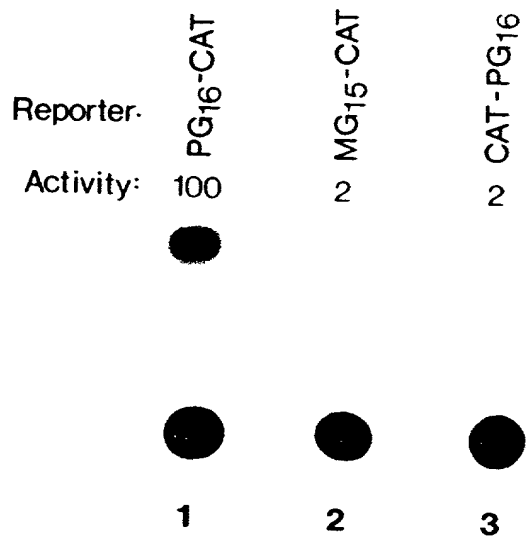


FIG. 16A

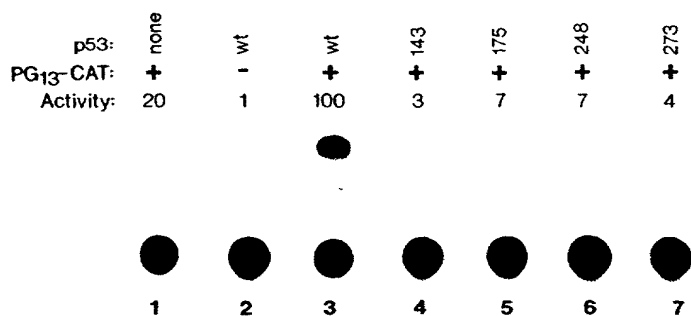


FIG. 16B

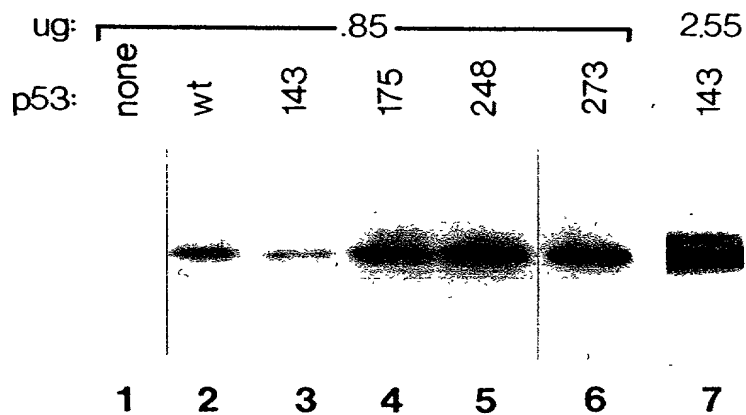


FIG. 17

| | | | | | |
|------------------------|----|----|-----|-----|------|
| p53-wt (ug): | 0 | 85 | .85 | .85 | .85 |
| p53-175 (ug): | 0 | 0 | 0 | .85 | 2.55 |
| PG ₁₃ -CAT: | + | - | + | + | + |
| Activity: | 12 | 0 | 100 | 44 | 11 |

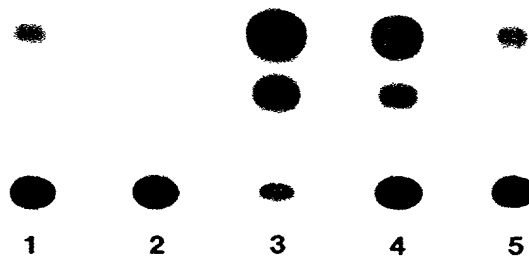


FIG. 18

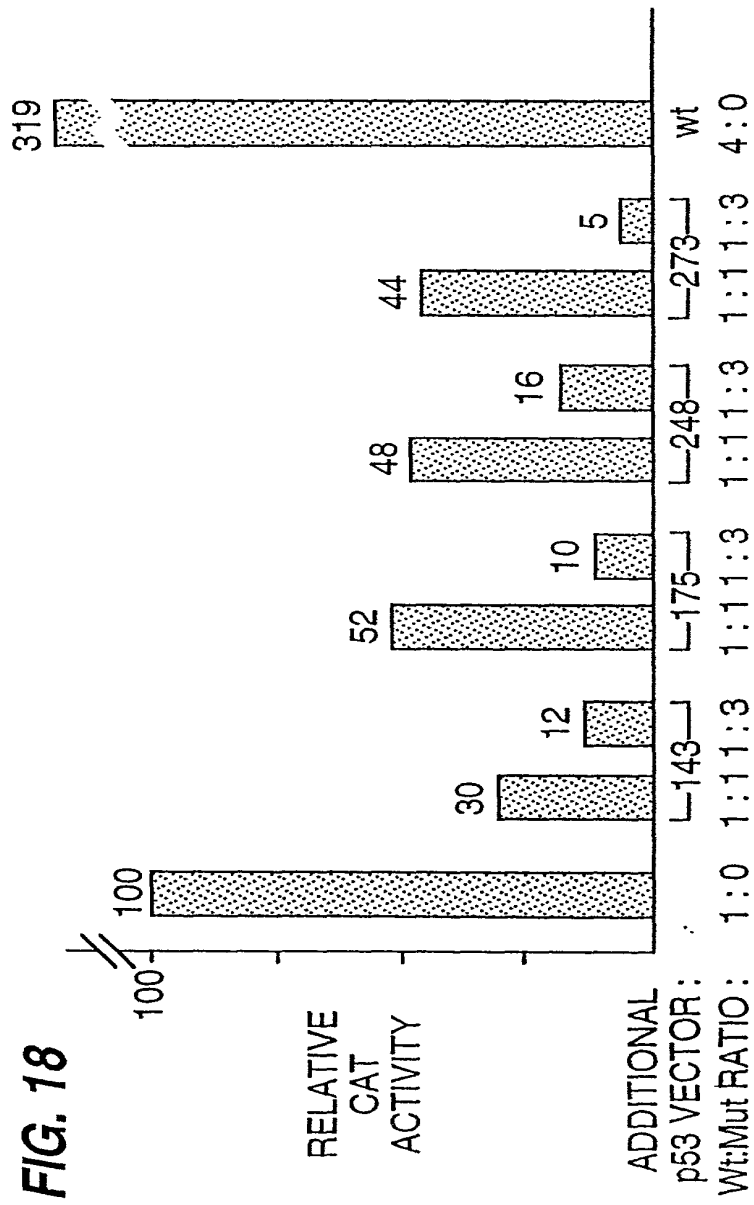


FIG. 19

